

OER PROJECT

(i) bin
-o εγινως κασο-
servo and sensors



Sandra Schön and
Martin Ebner
2018

Originally developed in German for
OERinfo - Informationsstelle OER
(2017) - <https://open-educational-resources.de/der-oer-canvas-teil-1/>

THE LEARNING RESOURCE

Which resource should be developed?
For example learning video, textbook, worksheet, online course

Who will learn with this resource?
For example "students 4th grade, Bavaria, Germany"

What prior knowledge is needed?

basic Arduino coding

What should be known afterwards?

type of resource

learning video

target group

students into robotics

learning goals

coding with Arduino

users

teachers student 12-17yo

until when?

open ended

license

apex CC

attribution (who is named at "BY"?)

FittHub.com 3lyk version -i-bin

where will be published?

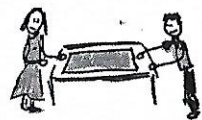
Git.hub

USE OF THE RESOURCE(S)

In which context?
for example: in learning maths

Maths, STEM, STEAM, robotics

Who will use it?
For example: teachers and parents of fourth grade students



LICENSE OF THE RESOURCE(S)

How to use the resource?
(see: <https://creativecommons.org/choose/>)

Who should we acknowledge? (attribution of people and organisations?)

FORMAT OF THE RESOURCE(S)

Which formats should be supported? For example for a textbook: html, odt or pdf?

mp4 video format

PROJECT ORGANISATION

WHEN?	WHAT?	TOOL(S)	WHO?
October 2019	project plan	Pencil and paper to draw our design	2 teachers 14 students
October 2019	partner search	Organizing our work group	2 teachers 12 students
November 2019	organisation	Arduino tutorials design of a prototype	2 teachers 12 students
December 2019	draft/ materials	Arduino kit, assembly	2 teachers 6-12 students
January 2020	quality assurance	Testing Arduino, sensors	2 teachers 6-12 students
February 2020	layout/ production	Adjusting values, make the video	2 teachers 4-12 students
March-April 2020	publication/PR	licence it, upload, present/share	2 teachers 4-12 students

EFFORT (IN HOURS)

2 hours
4 hours
4 hours
4 hours
4 hours
6 hours
4 hours

EXISTING MATERIALS

Attention! Make sure that you are allowed to use these materials under the selected license

Youtube tutorials, Forum Arduino CC, Audacity, Openshot, Google Classroom

WHAT ELSE CAN BE DONE WITH THE OER?

PARTNERS

Who else do we need?

e-Twinning partners "Maths is all around" Forum

INCENTIVES FOR COLLABORATION

- Give credit in the attribution
- Give credit within project description
- Prepare a printed version for the authors
- Create distributable resource
- Share programming / code that can be re-used (re-edited)

DISTRIBUTING THE OER

Git hub school site: 3lyk-veroos.inna.sch.gr

ARCHIVING THE OER

Git hub School site: 3lyk-veroos.inna.sch.gr

OER PROJECT

(i) bin
→ ΕΓΧΕΙΡΙΔΙΟ ΚΑΙΟΣ
use of LEDs



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Who will learn with this resource?
For example "students 4th grade, Bavaria, Germany" → target group

What prior knowledge is needed?

use of red LEDs
with proximity
sensors

What should be known afterwards? → learning goals

USE OF THE RESOURCE(S)

In which context?
for example: in learning maths

learning Maths,
STEM; STEAM
basic programming of
Arduino

Who will use it?
For example: teachers and
parents of fourth grade students → users

until when?

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named at "BY"?)

FORMAT OF THE RESOURCE(S)

Which formats should be
supported? For example for a
textbook: html, odt or pdf?

mp4
video format → where will
be published?

learning
video

students
learning
robotics

learning
to
programme
Arduino

teachers
students
12-17yo

open
ended

open CC

Git Hub, cloud
3 lyk
version/
-i-bin

Git.hub

PROJECT ORGANISATION

WHEN?	WHAT?	TOOL(S)	WHO?
October 2019	project plan	Pencil and paper Basic design of idea	2 teachers 12 students
October 2019	partner search	Getting a group of students involved	2 teachers 12 students
November 2019	organisation	Arduino tutorials	2 teachers 6-12 students
December 2019	draft/ materials	Getting Arduino kit, LEDs, testing the code	2 teachers 6-12 students
February 2020	quality assurance	Adding LEDs to breadboard trials with code	2 teachers 6-12 students
February 2020	layout/ production	Adjusting values make video	2 teachers 6-12 students
March-April 2020	publication/PR	licence it, upload it, present, share	2 teachers 4-12 students

EFFORT (IN HOURS)

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6 hours
6 hours
2 hours

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Forum Arduino CC
Audacity
OpenShot
Google Classroom

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PARTNERS
Who else do we need?

e-Twinning partners
"Maths around the world"
Forum

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3lyk-version.inq.sch.gr

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OER PROJECT

(i) bin
o Egunos kidos
- ESP use -



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For example "students 4th grade, Bavaria, Germany"
- What prior knowledge is needed?

circuits
Maths
Arduino coding

USE OF THE RESOURCE(S)

- In which context?
for example: in learning maths

Maths, STEM,
STEAM,
Robotics

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FORMAT OF THE RESOURCE(S)

- Which formats should be supported? For example for a textbook: html, odt or pdf?

mp 4
video format

type of resource

learning video

target group

students
teacher

learning goals

coding with
Arduino

users

teachers
students
12-17yo

until when?

open
enden

license

open
cc

attribution (who is named at "BY"?)

gitHub.com/
3lycraim/
i-bin

where will be published?

git hub

PROJECT ORGANISATION

WHEN?	WHAT?	TOOL(S)	WHO?
October 2019	project plan	piece of paper to draw basic design	2 teachers 4-12 students
October 2019	partner search	organizing 2 working teams	2 teachers 6-12 students
November 2019	organisation	Arduino tutorials Youtube tutorials	2 teachers 6-12 students
December 2019	draft/materials	Arduino kit	2 teachers 6-12 students
January 2020	quality assurance	Putting the circuit together	2 teachers 6-12 students
February 2020	layout/production	Trying out on our robot	2 teachers 6-12 students
March 2020	publication/PR	licence the video share it	2 teachers 6-12 students

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School site

ARCHIVING THE OER

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EFFORT (IN HOURS)

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4 hours

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6 hours

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2 hours

WHAT ELSE CAN BE DONE WITH THE OER?

Mark using colours

PARTNERS

Who else do we need?

e-learning "Maths is all around"

Forums

OER PROJECT

(i) bin
o εγινως καλός
- sensors and buzzer -



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- Who will learn with this resource?
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- What prior knowledge is needed?
STEM skills, MATHS, coding, → learning goals

learning video

Students learning robotics

Programming Arduino

teachers students 12-17yo

open ended

open cc

GitHub.com
3lyk-veroias/-i-bin

Git hub

USE OF THE RESOURCE(S)

- In which context?
for example: in learning maths

learning STEM, STEAM, robotics, basic programming of Arduino

- Who will use it?
For example: teachers and parents of fourth grade students → users
- until when?

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mp 4. Video format

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